

**INDUCTION HEATING SYSTEM  
WITH RESONANCE DETECTION**

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**Abstract**

An induction heating system is provided. The induction heating system comprises a power switch, a resonant heating circuit, and a pulse initiator. The resonant heating circuit is configured to be coupled to a load and configured to generate an oscillating voltage in response to a DC pulse input having a DC voltage level. The pulse initiator is configured to provide a monitoring voltage having a value representative of an average value of a peak voltage of the oscillating voltage generated by the resonant heating circuit and to provide a pulse initiation signal to initiate application of a subsequent DC pulse to the resonant circuit when the value of the monitoring voltage is substantially equal to or less than a predetermined threshold value.